



THE UNIVERSITY
of ADELAIDE



Veterinary Introduction to Business and Enterprise
Key Performance Indicators
for
Veterinary Business

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VIBE Learning Guide

Key Performance Indicators (KPIs) for Veterinary Business

Table of Contents

Introduction to KPIs.....	2
KPIs for Veterinary Business.....	3
Financial Ratio KPIs for Veterinary Business.....	5
Measures of Rates of Return.....	5
Return on Sales.....	6
Return on Assets and Return on Equity.....	7
Measures of Solvency – can the bills be paid?.....	8
Debt Ratio Measures.....	9
Inventory Turnover Measures.....	11
Debtor Control Measures.....	12
Sales KPIs for Veterinary Business.....	14
Income Area Sales KPIs.....	14
Veterinarian Productivity KPIs.....	16
Transaction Based KPIs.....	18
Cost Control KPIs for Veterinary Business.....	19
Total costs to total income%.....	19
Other cost centres to total income %.....	19
Monthly and Annual Management KPI Review.....	22
Benchmarking.....	24
References:.....	25
Authors.....	25
Acknowledgements.....	25



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Introduction to KPIs

Key Performance Indicators (KPIs) are standardised calculations of quantifiable and measurable data for management purposes. KPIs reflect performance or trends occurring within a business that impact on achievement of business goals and objectives. KPIs can be measured at a number of levels: the business entity level, business unit level, work group level and/or at an individual level. The importance of KPIs must be kept in perspective as they are only indicators, and must be interpreted carefully. KPIs can be measured across a number of areas of a business. Some of these areas include business performance, human resources, and marketing. In veterinary practice, KPIs can be used to provide information about the operations of the business.

A successful veterinary business monitors a range of KPIs to seek ways to improve service provision and profitability. Improvements to veterinary practice performance can only be made when data is collected and interpreted using KPIs. The first step to the use of KPIs for the veterinary business is to identify the most important strategic goals. What does the business hope to achieve in the long term? Perhaps the answer is excellence in client service, reduced debt or increased income across the different areas of the business. Once you know what it is that the business is trying to achieve, you can then decide on the KPIs you wish to track and collate relevant data. A continuous process of business monitoring with regular reviews of goals, business direction and data collation will facilitate good decision making and ensure a successful business model.

These topic notes present a range of financially based KPIs for assessing veterinary business performance. For information on KPIs for individual veterinarians please refer to the section of these notes for veterinarian based productivity KPIs and keep in mind that there are certainly other indicators of performance which are not covered by these particular financial KPIs. For information on human resource KPIs and marketing KPIs, the reader is recommended to seek out current business management references (such as Ackermann 2007; Katz and Green 2009; Henry 2014) and check the VIBE website for future updates.

KPIs for Veterinary Business

As stated above, KPIs are measurable indicators which reflect business performance towards achieving goals and objectives. KPIs are useful to examine or monitor business performance and can be a valuable risk management tool. KPIs help managers make business decisions to correct deficiencies or maximise success. Although KPIs do not identify the requirements for success, the benefit of examining KPIs is in identifying business directions and monitoring for

continuous improvement. Veterinary business KPIs can be used for comparison of performance within a business (e.g. from year to year) or to similar businesses.

Veterinary business financial KPIs can be grouped into three basic categories, adapted from Stowe (2004), and illustrated in Figure 1, below:

- measures of solvency and profitability (financial ratios) – of chief interest to the bank/lender
- measures of sales - of chief interest to management, and which affect profitability
- measures of cost control - of chief interest to management, and which affect profitability

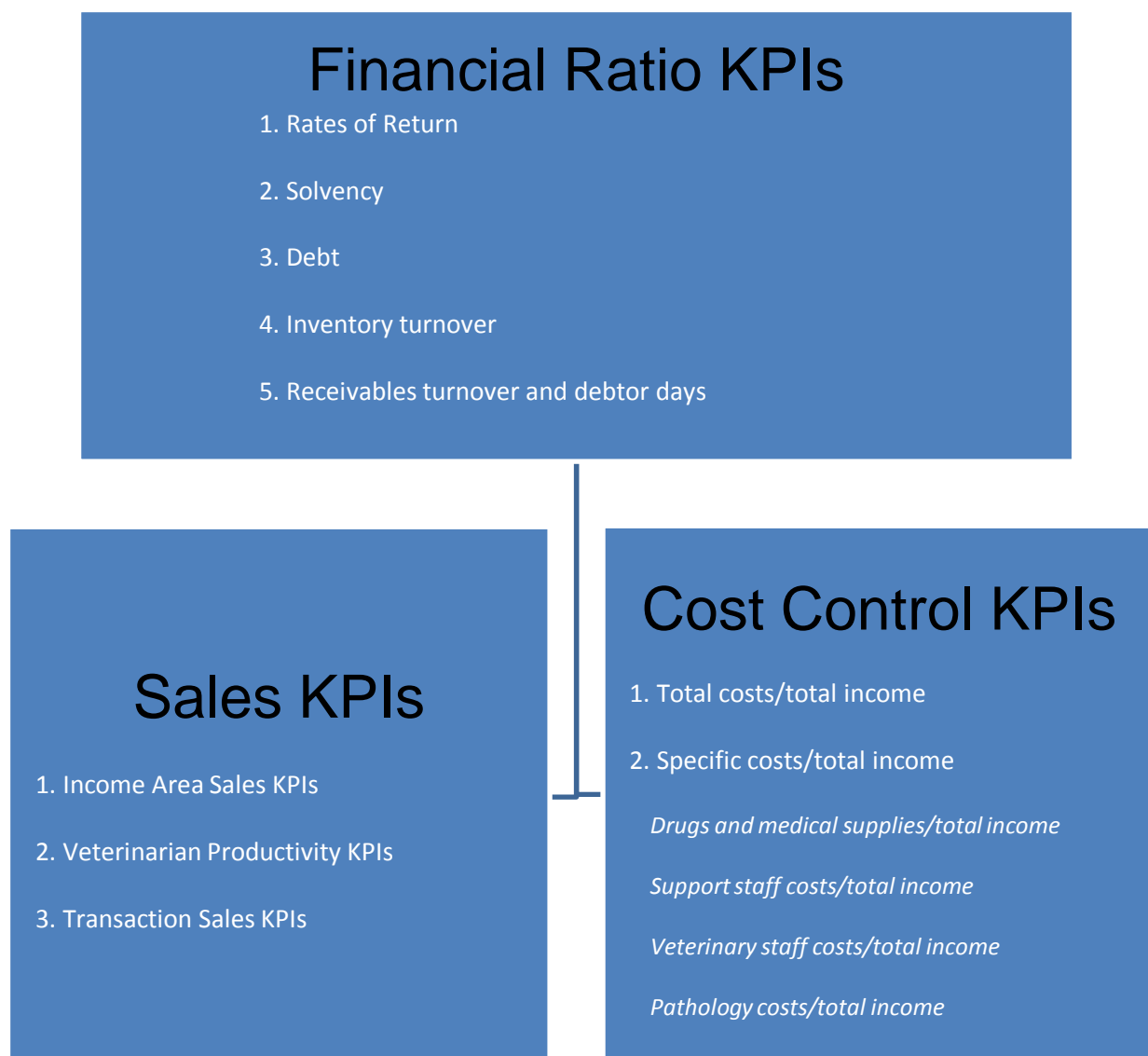


Figure 1: Financial Ratios, Productivity and Cost Control KPIs for a veterinary business

Financial Ratio KPIs for Veterinary Business

Financial ratio KPIs are measures of overall financial performance regarding the ability of the business to earn a return for the owners (profitability) and ability to pay debtors on time (solvency). Financial ratio KPIs include:

- Rates of Return: Investment income or loss for a specified time period, calculated as a percentage gain or loss on initial cost of investment.
- Solvency: Ability of a business to meet financial obligations
- Debt ratio: Ratio of debt to assets
- Inventory turnover: Frequency of sale and replacement of inventory
- Debtor control or Receivables turnover ratio: Ability of the business to collect monies owed

Financial ratios are obtained using figures from the Statement of Financial Position (Balance Sheet) and the Income Statement (Profit and Loss). Prior to calculating veterinary business financial ratio KPIs it is important to exclude income that is not derived from the core business (e.g. rental of spare space to unrelated business).

Measures of Rates of Return

There are three rates of return important to veterinary businesses: rate of return on sales, rate of return on assets and rate of return on owner equity. It is important to know the differences between, and the applicability of, these rates of returns. Rates of return are calculated using data obtained from the Statement of Financial Position (Balance Sheet) or from the Income Statement (Profit and Loss). Rates of return are calculated using the following equations:

ROS Rate of return on sales = net profit / total sales

ROA Rate of return on assets = net profit / total assets

ROE Rate of return on owner equity = net profit / owners' equity

Note that for each of the rate of return calculations the denominator differs, but the numerator is net profit.

Return on Sales

Return on Sales (ROS) shows how much profit the business generates from each dollar of total income. It is an important performance measure that illustrates how well a business manages costs, pricing strategies and client relations. There are three basic versions of ROS:

- Return on Sales ROS
- Earnings Before Interest and Taxes (EBIT)
- Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA)

These are versions of an overall profit margin calculation for a business. The ROS profit margin calculation is the most basic, and is generally used for internal comparisons (i.e. month to month or year to year for the same business). The EBIT and EBITDA margin calculations are generally used for external comparisons (or benchmarking) as they force adjustment for some of the highly variable items prior to calculation. EBIT and EBITDA margins are often used to assess earning potential for strategic planning purposes, such as for sale of the business.

Using information from the Income Statement (Profit and Loss), the three versions of ROS can be calculated using the following equations:

$$\text{ROS} = \text{net profit} / \text{total sales}$$

$$\text{EBIT} = \text{net profit (before interest and tax)} / \text{total sales}$$

$$\text{EBITDA} = \text{net profit (before interest, tax, depreciation and amortisation)} / \text{total sales}$$

Table 1 provides an example of a summary income statement and Table 2 shows the associated ROS calculations.

Table 1: Example of a summarised income statement (profit and loss)

Summarised Lamone and Yackville Veterinary Practice Income Statement (Profit and Loss) 2012 - 2013			
Total Sales			\$1,404,652
Less: Variable Costs (items)	Cost of Goods Sold	\$406,500	\$406,500
Less: Expenses (fixed costs or overhead)	Salaries	\$631,496	\$934,174 (total overhead)
	Total employee related expenses	\$19,485	
	Other fixed operating costse.g. rent, electricity, repairs, insurance, telephone	\$235,810	
	Interest	\$14,204	
	Depreciation	\$33,179	
Equals: Net Income			\$63,978

Table 2. Return on Sales calculations for Lamone and Yackaville Veterinary Practice 2012 - 2013

	Formula	Numerator	Denominator	Answer
ROS	net profit / total sales	63,978	1,404,652	0.05 or 5%
EBIT	net profit (before interest and tax)/ total sales	63,978 + 14,204 + 0 = 78,182	1,404,652	0.06 or 6%
EBITDA	net profit (before interest, tax, depreciation and amortisation)/ total sales	63,978 + 14,204 + 0 + 33,179 + 0 = 111,361	1,404,652	0.08 or 8%

Return on Assets and Return on Equity

Return on assets (ROA) is inherently a much more powerful KPI than its counterpart, return on equity (ROE). ROA shows how much profit a business generates from each dollar invested in the total assets of the business. ROA is an important performance measure that illustrates how well an organisation manages costs, pricing strategies and customer relations to return a margin to those who have invested monies into the business. The margin must be sufficient to cover return on investment to those who have invested in the assets of the business, whether this is the bank or the owner. As a KPI, ROE can be deceiving, as shown in the example calculations for Lamone and Yackaville Veterinary Practice, in Table 4 below. As a small business, this practice has a very poor ROS and a poor ROA, while the ROE is reasonable. If the owners' calculated ROE, but not ROS or ROA, they would likely overestimate performance of the business.

To calculate return on assets and return on equity, total assets and total owners' equity figures from the Statement of Financial Position (Balance Sheet) are required, as well the net profit figure from the Income Statement (Profit and Loss). As shown below, return on assets and return on equity are calculated using the following equations:

$$\text{ROA} = \text{net profit} / \text{total assets}$$

$$\text{ROE} = \text{net profit} / \text{owners' equity}$$

Table 3 provides an example of a summary statement of financial position and Table 4 shows the associated ROA and ROE calculations.

Table 3. Summarised Statement of Financial Position for Lamone and Yackaville Veterinary Practice 30th June 2013

Summary of Statement of Financial Position (Balance Sheet) Lamone and Yackaville Veterinary Practice 30th June 2013				
Current assets	Cash and receivables	\$115,236	\$234,229	
	Inventory	\$112,085		
	Prepayments	\$6,908		
Non-current assets	Fixed Assets	\$282,949	\$317,949	
	Intangible assets	\$35,000		
Total Assets				\$552,177
Current liabilities	Accounts payable to trade creditors	\$95,057	\$125,321	
	Superannuation, PAYG, and Leave provisions	\$25,264		
	GST NET payable	\$5,000		
Non-current liabilities	Loans – equipment, trailer, motor vehicles	\$241,018	\$241,018	
Total Liabilities				\$366,339
	Contributed capital	\$150,000		
	Retained earnings after drawings and current year earnings	\$35,838		
Total Owners Equity				\$185,838
Total Liabilities and Owners Equity				\$552,177

Table 4. Return on Assets and Return on Equity calculations for Lamone and Yackaville Veterinary Practice 2012 - 2013

	Formula	Numerator	Denominator	Answer
ROA	net profit/total assets	63,978	552,177	0.12 or 12%
ROE	net profit/owners' equity	63,978	185,838	0.34 or 34%

Measures of Solvency – can the bills be paid?

Investors, most often banks, want surety that a veterinary practice is using debt wisely, i.e. to leverage practice profits. Also, banks like to ensure that the businesses they invest in can manage repayments. Banks apply KPIs when reviewing financial statements. The KPIs of interest to the bank, or lender, include working capital, current ratio and acid-test ratio.

Working capital measures the accessible resources required to support day-to-day business operations and avoid shortfalls. It is calculated as current assets less current liabilities. Insufficient working capital results in difficulty meeting expenses, such as wages or stock.

Current ratio is the value of current assets divided by current liabilities. The rule of thumb for evaluating current ratio is that the minimum acceptable ratio is 2.0, and higher is better.

The acid-test (or quick) ratio is a measure of how quickly a business can pay bills. It is the ratio between all assets that are quickly convertible to cash, and all current liabilities. This ratio specifically excludes inventory, and indicates that a business does not have to rely on the sale of inventory to pay the bills. A 1:1 ratio is generally accepted as satisfactory (Stowe 2004).

Working capital, current ratio and acid-test ratio can be calculated using figures from the business's Statement of Financial Position (Balance Sheet). Each of these financial KPIs are calculated using the following equations:

Working Capital = Current assets – current liabilities

Current Ratio = Current assets/current liabilities

Acid-test Ratio = Cash and receivables/current liabilities

Table 3, above, shows the case study practice's 2013 Statement of Financial Position. An example of solvency KPIs for Lamone and Yackaville Veterinary Practice is presented in Table 5 below.

Table 5. Calculations of Solvency KPIs for Lamone and Yackaville Veterinary Practice 30th June 2013

	Formula			Answer
Working Capital	Current assets – current liabilities	234,229	125,321	\$108,908
		Numerator	Denominator	Answer as a ratio
Current Ratio	Current assets/current liabilities	234,229	125,321	1.87:1
Acid-test (quick) Ratio	Cash and receivables/current liabilities	234,229 - 112,085	125,321	0.97:1

Debt Ratio Measures

Debt ratio is a measure of debt compared to equity. It is important to banks and other lenders that the business is not over burdened with debt. A business' debt to equity ratio indicates what proportion of equity and debt the business is using to finance its assets. Sometimes only interest-bearing, long-term debt is used instead of total liabilities in the calculation.

The following excerpt from <https://www.smallbusiness.wa.gov.au/debt-equity-and-efficiency-ratios> is a very good summary of the importance of debt ratios for businesses.

The **debt to equity ratio** shows the proportion of capital invested by the business owners to the funds provided by external lenders. It gives a comparison of how much of the business was financed by owner's equity and how much was financed through debt or liabilities.

The formula used to calculate the debt to equity ratio is:

$$\text{Debt to equity ratio} = \text{Total Liabilities} \div \text{Owners' Equity}$$

The higher the ratio, the more the business relies on debt to finance its operations and the greater the risk to external lenders. A debt equity ratio of 1:1 indicates that the external lenders and the owners are bearing the same degree of risk.

A ratio of less than 1:1 means that:

- debt is less than owners' equity
- the business is positively geared
- the external lenders are bearing less risk than the owners
- the owner has a stronger financial interest in the business than external lenders

A ratio of more than 1:1 means that:

- debt is higher than owners' equity
- the business is negatively geared
- the external lenders are bearing more risk than the owners
- external lenders have a stronger financial interest in the business than the owner

Generally, a debt to equity ratio in the range of 1:1 to 4:1 is acceptable but will depend on individual business and industry circumstances. However, most banks will have guidelines and limits for the debt to equity ratio. A ratio of 2:1 is often used for small business loans (a limit of up to \$2 loaned for every \$1 of owner's equity).

Too much debt can put your business at risk and indicates possible difficulty in meeting interest and principal repayments.

Too little debt means you may not be taking advantage of opportunities and realising the full growth potential of your business.

Debt ratios can be calculated using figures from the business' Statement of Financial Position (Balance Sheet). The difference between the standard debt ratio and the long term debt ratio reflects the degree to which the business relies on short term liabilities, i.e. creditors, bank overdraft and credit cards, to fund its operations. Each of these financial debt ratio KPIs are calculated using the following equations:

$$\text{Debt to Equity Ratio} = \text{total liabilities} / \text{total owners' equity}$$

$$\text{Long Term Debt to Equity Ratio} = \text{non-current liabilities} / \text{total owners' equity}$$

Table 3, above, shows the case study practice's 2013 Statement of Financial Position. An example of debt ratio KPIs for Lamone and Yackaville Veterinary Practice is presented in Table 6, below.

Table 6. Debt KPIs for Lamone and Yackaville Veterinary Practice 30th June 2013

	Formula	Numerator	Denominator	Answer as a Ratio
Debt to Equity Ratio	total liabilities/total owners' equity	\$366,339	\$185,838	2.0:1
Long Term Debt to Equity Ratio	non-current liabilities/total owners' equity	\$241,018	\$185,838	1.3:1

Inventory Turnover Measures

Inventory turnover (IT) is a measure of overall inventory management. It is calculated by dividing the cost of drugs and other saleable items by the average inventory value. The higher the calculated number, the more often the inventory turns over, resulting in less outdating, less damage, and less inventory on hand at any one time. Typical veterinary practice IT is for inventory to turn over 5 – 8 times per year (Ackermann 2007) p. 142). However, best practice for animal veterinary practice is approximately 8 – 12 times per year (Stowe 2004). When IT is at 12, items are paid for in the same month of being sold. When IT is at 6, the veterinary business is holding inventory for 2 months before sale.

The days in stock ratio is a reflection of IT, but is represented by the number of days the average inventory item is held in stock. Individual item turnover and days in stock can also be used to assess the holding of particular pharmacy or non-pharmacy items. The business should consider whether low turnover items should be stocked, or ordered on client request. Inventory turnover for particular merchandised items can also be used in decisions of placement in display areas, i.e. higher turnover items should have the most prominent locations and greater shelf space.

Inventory turnover and days in stock ratios can be calculated using figures from the business' Income Statement (Profit and Loss). The KPIs for Inventory Turnover and Days in stock are calculated using the following equations:

$$\text{Average inventory level}^{**} = (\text{opening inventory} + \text{closing inventory}) / 2$$

$$\text{Inventory Turnover (IT) Ratio} = \text{Cost of Inventory Goods Sold} / \text{average stock level}$$

$$\text{Days in stock} = 365 / \text{IT}$$

*opening and closing inventory are used to calculate the Cost of Goods sold figure. The figures for opening and closing inventory are derived by accurate inventory level determination, most often by stock take close to the date these figures are required, such as at the end of a half or full financial year. The terms opening inventory and closing inventory are interchangeable with the terms opening stock and closing stock.

**the figures for opening and closing inventory are often shown on the income (profit and loss) statement; if not, they can be determined using two separate balance sheet figures for inventory e.g. June 30th 2012 and June 30th 2013.

Table 1, above, shows the case study practice's 2013 Income Statement. An example of the inventory ratio KPIs for Lamone and Yackville Veterinary Practice is presented in Table 7, below.

Table 7. Calculation of Inventory Turnover KPIs for Lamone and Yackville Veterinary Practice 2012- 2013

	Formula	Inventory at beginning of the period	Inventory at end of the period	Answer
Average inventory level	(Inventory at beginning + inventory at end)/2	\$111,387 (July 1st, 2012)	\$112,085 (June 30, 2013)	\$111,736
		Numerator	Denominator	Answer as a ratio
Inventory Turnover (IT) Ratio	Cost of Inventory /average inventory level	\$406,500	\$111,736	3.63:1
Days in stock = 365/IT	365/IT	365	3.98	100 days

Debtor Control Measures

Receivables turnover ratio, or accounts receivable turnover ratio, is an indicator of the effectiveness of debt collection. This ratio determines how quickly outstanding balances are collected from clients during an accounting period. As a KPI, it is an important indicator of both financial and operational performance. This measure can be used to determine the effectiveness of the business in extending credit and collecting debts.

The receivables turnover ratio is calculated as Total Sales divided by Accounts Receivable. A high receivables turnover ratio suggests that the management of debtors is effective as accounts receivable are being collected in a timely manner. Conversely, a low value for the receivables turnover ratio suggests inefficiency in the management of debtors.

Receivables turnover ratio is commonly used to calculate debtor days, or days sales outstanding, which is a measure of the average time period required to collect debts, i.e. the average number of days required to convert accounts receivable into cash. For debtor days, a

lower figure is better, as a high figure suggests inefficient debt collection or potential bad debts. A small animal veterinary business may operate on cash only terms, or may allow accounts under strict conditions. However, a large animal veterinary business servicing the animal production sector may issue accounts on a regular basis. Adapted from http://www.readyratios.com/reference/asset/receivable_turnover_ratio.html (accessed 1/4/2013).

Debtor control ratios can be calculated using figures from the business's Income Statement (Profit and Loss), Statements of Financial Position (Balance Sheet) and/or a twelve month Transaction Analysis Report over the same period as the financial statements.

The KPIs for the Receivables and Debtor Days ratios are calculated using the following equations:

$$\text{Average debtors outstanding}^* = (\text{opening receivables} + \text{closing accounts receivables}) / 2$$

$$\text{Receivables turnover (RT) ratio} = \text{total income} / \text{average debtors outstanding}$$

$$\text{Debtor days} = 365 / \text{RT}$$

* These figures can be obtained either from two Statements of Financial Positions (Balance Sheets) twelve months apart, or from the opening and closing debtors figure in a twelve month transaction analysis report over the same period

Table 1, above, shows the case study practice's 2013 Income Statement. Table 3, above, shows the case study practice's 2013 Statement of Financial Position. An example of the receivables ratio KPIs for Lamone and Yackaville Veterinary Practice is presented in Table 8, below.

Table 8. Calculation of Debtor control KPIs for Lamone and Yackaville Veterinary Practice 2012 -2013

	Formula	Receivables at beginning of period	Receivables at end of period	Answer
Average debtors outstanding	(opening receivables + closing accounts receivables)/2	\$102,869 (1/7/2012)	\$202,381 (30/6/2013)	\$152,625
Receivables turnover (RT) ratio	total income/average debtors outstanding	\$1,404,652	\$152,625	9.2:1
Debtor days	365/RT	365	9.2	40 days

Sales KPIs for Veterinary Business

Sales KPIs examine sales performance of a veterinary business and help identify the desired direction of business growth, for example aiming for an increase in profitability, as opposed to increasing the number of services delivered. To calculate sales KPIs various sales reports from the debtors program of the veterinary business are required. Behind the user interface, these programs collect data to generate standardised reports which can be used with the Income Statement (Profit and Loss) to calculate sales KPIs. The two sales reports commonly used to obtain figures to calculate sales KPIs are the Transaction Analysis and the Client Retention reports. These reports should be generated for the same time period as the Income Statement (Profit and Loss), and a twelve month time frame is best.

There are several broad areas of sales KPIs which are useful to examine, and these are discussed below under the following headings:

- Income Area Sales KPIs
- Veterinarian productivity KPIs and
- Transaction Sales KPIs.

Income Area Sales KPIs

Measurement of income area sales as a percentage of total income is useful for internal benchmarking, i.e. comparison from year to year for the same business, trend analysis and strategic planning. This KPI is generally not useful for comparing different veterinary businesses, as each business is unique. However, broad comparisons between similar types of practices may be useful.

Veterinary practices generally have two important business components: sale of professional knowledge and veterinarian time (professional fees) and sale of animal health items (ordered items). It is useful to watch for trends in each of these components of the business. To calculate the proportion of income from each of these components of the business, use the following formulae:

- $\text{Professional fees income} / \text{total income}$
- $\text{Item sales income} / \text{total income}$

Another important income area that can be useful as an income area sales KPI is income generated by a particular species, for example comparison of the income generated from dogs

to that of cats, or comparing income generated by large animals to that of small animals. To calculate income by species the formula is: species income/total income.

There are many income areas that can be examined as KPIs, depending on the type of practice and the goals of the business. Examples are: Branch income/Total income; after hours income/total income; specialist services/total income. Table 9 below shows a summary of income area sales KPIs for the case study practice, Lamone and Yackaville Veterinary Practice.

Table 9. Calculation of income area sales KPIs for Lamone and Yackaville Veterinary Practice 2012 -2013

Lamone and Yackaville Veterinary Practice Income Area Sales KPIs 1 st July 2012 – 30th June 2013					
Professional fees /total sales	776,175		1,404,652	55%	
Inventory Income/total sales	523,177		1,404,652	37%	
Pathology (In house, faecal egg counting and external pathology)/total sales	47,364		1,404,652	3%	
Travel charged/total sales	57,936		1,404,652	4%	
Species income/total sales	Alpaca	25,151	454,943	1,404,652	32%
	Cattle	228,012			
	Donkey	6,519			
	Goat	7,250			
	Horses	84,338			
	Sheep	103,672			
	Bird	1,890	949,709	1,404,652	68%
	Cat	173,394			
	Dog	772,756			
	Ferret	1,269			
	Wildlife	399			
Branch income/total income	Lamone	953,710	1,404,652	68%	
	Yackaville	450,942	1,404,652	32%	

Veterinarian Productivity KPIs

Many sales KPIs are best adjusted to a standard key driver, which in the case of a service delivery business, such as a veterinary practice, is a full time equivalent veterinary labour unit. Similar to income area KPIs, veterinarian productivity KPIs are suited to internal benchmarking (i.e. comparison from year to year for the same business), trend analysis and related strategic planning.

The KPIs for the veterinary productivity KPIs at first depend on the calculation of the number of full time equivalents (FTE) of veterinarians for a practice, as follows:

- Calculate the number of veterinary hours paid for a typical week (include holidays, study leave and sick leave) and add these together,
- Divide by the standard award hours (in Australia the award is currently 38 hours per week).

Table 10, below, is an example of calculation of the full time equivalents of veterinary staff for the case study Lamone and Yackaville Veterinary Practice.

Table 10: Lamone and Yackaville Veterinary Practice Veterinary Full Time Equivalent calculations 2012 - 2013

Lamone and Yackaville Veterinary Practice Veterinary Full Time Equivalent calculations 1 st July 2012 – 30th June 2013				
Veterinarian	Per year	Rostered hrs per week	Calculation of FTE (based on 38 standard hours per week)	FTE
Bob Grant		20	20/38	0.53
Jack O'Grady		20	20/38	0.53
Ben O'Grady		38	38/38	1
Jenny Nicholls		38	38/38	1
Kristy Ng		38	38/38	1
Marie O'Grady		15	15/38	0.40
Locum	\$4,000 in the last 12 months @ \$55/hour i.e. 72.7 hours	1.4	1.4/38	0.04
		170.4	38	4.5 FTE

Some commonly used income KPIs linked to veterinary full time equivalents include:

Sales income per vet

The KPI for Sales Income per vet is calculated using the following equation:

Sales income per vet = total practice income / FTE vets

This KPI can be skewed according to the type of practice and business model. Consider a veterinary practice with highly trained support staff, and high support staff to veterinarian ratio. In this case, support staff undertake many of the non-veterinary procedures, allowing veterinarians more time to consult, and thus minimising veterinarian time needed to achieve the same income. In contrast, mixed practices in rural areas, where the number of veterinarians on the after-hours duty roster is maintained, usually employ a veterinarian rather than a support staff member.

Annual transactions per vet

In accounting programs, a transaction is created when an invoice is created. Veterinary services and/or products are paid for on presentation of an invoice for the particular service and/or goods provided.

The KPI for annual transactions per vet is calculated using the following equation:

Annual transactions per vet = total number of transactions in one year / FTE vets

For veterinarians working in a business servicing beef or sheep producers typical invoices may be for farm visits of 2 to 4 hours. Northern beef veterinarians may invoice for several days of work at a time during pregnancy testing season. A small animal veterinary business's invoices will generally be for fifteen minute consultations and for surgeries, most of which are less than an hour long. As such, veterinary businesses seeing large number of animals for relatively long periods of time may have lower numbers of annual transactions per veterinarian than those that see a lot of animals as individuals.

Active clients per vet

This KPI is vital in a market with an increasing supply of veterinarians, and is calculated using the following equation:

Active clients per vet = number of client visits in one year / FTE vets

New clients per vet

This KPI is useful as a measure of growth, and of marketing effectiveness, and is calculated using the following equation:

New clients per vet = number of new clients in one year / FTE vets

Lapsed clients per vet

This is a measure of non-engaged clients, and of the effectiveness of the practice to bond with clients and patients. This KPI is calculated using the following equation:

Lapsed clients per vet = number of lapsed clients in the year / FTE vets

This KPI must be interpreted carefully if a veterinary business is located in a demographic area with many non-permanent residents.

For further information on these sales KPIs see Stowe (2004 p. 49)

Transaction Based KPIs

Transaction based KPIs are linked to a transaction and are useful for internal and external benchmarking. Common KPIs used for service based businesses, such as veterinary businesses, include:

Average Transaction Charge (ATC)

ATC is the relationship between the number of transactions and total income. ATC may be lower in small animal only practices, and also in practices that use the one invoice per day system for long term patients. This KPI is calculated using the following equation:

Average Transaction Charge = total income / total number of transactions

Medical ATC (mATC)

The Medical ATC (mATC) is the relationship between medical based income and total number of transactions. mATC can be up to 40% lower than ATC in practices with high volume sales for non-prescription animal health items. This KPI is calculated using the following equation:

Medical ATC = (total income less non-medical income) / total number of transactions

Annual transactions per active client

This KPI is a measure of the average number of visits per client in one year. This is a useful KPI to calculate as a low, or declining, value could indicate that the bond with clients is not being established effectively. Conversely, a high value indicates frequent return visits and suggests good relationships exist between veterinarians and clients. This KPI is calculated using the following equation:

Annual transactions per active client = total transactions for one year / number of active clients for one year

Cost Control KPIs for Veterinary Business

Cost control is the management of business expenses. Cost control KPIs help identify where a practice can trim costs to improve profitability. Cost control KPIs can (and should) be compared to performance in previous years (internal benchmarking) and, if possible, also be compared to other veterinary practices (external benchmarking). There can be a significant difference between cost control KPIs for different veterinary businesses. So, when undertaking external benchmarking it is best to compare similar veterinary businesses, i.e. companion animal only practices, mixed practices or practices with branches. Cost control KPIs generally measure the relationship between total costs and total income, or the relationship between particular cost centres and total income, such as drugs and medical supplies, support staff costs, veterinary staff costs, pathology costs and more.

Total costs to total income%

To arrive at total costs for the business, the sum of the cost of goods sold and total expenses from the Income Statement (Profit and Loss) are added together. This figure is then divided by the total income for the veterinary business. This KPI is the inverse of the Return on Sales KPI. So, if the ROS is 10%, Total costs % should be 90%. This KPI is calculated using the following equation:

Total costs % = sum of business costs / total income

Before comparing this KPI to other practices, it is important to ensure that owners' salaries are represented in the expenses, or a realistic figure is inserted before calculation.

Other cost centres to total income %

As discussed above, other subsets of veterinary business expenses, or cost centres, can be related to total income to help monitor the effectiveness or degree of influence expenditure in these areas has on profitability. The more commonly used cost control KPIs are presented below.

Drugs and medical supply %

This KPI measures the proportion of medication and surgical inventory costs relative to total income. It does not include food products, retail or pathology items. It is commonly around 15 – 18% for small animal practices (Stowe 2004). If it is higher than this, or is increasing from year to year for the veterinary business, there may be overstocking, excessive wastage, or missed charging occurring. As such, this KPI is an indicator of overall medical inventory management.

When this KPI is examined alongside the Inventory Turnover (IT) KPI, the Days in Stock KPI, and calculation of the overall margin achieved for drugs and surgical inventory, a useful overview of the management of prescription and medical products can be obtained. This KPI is calculated using the following equation:

Drugs and medical supply % = sum of drugs and surgical item costs / total income

When this KPI reduces from one period to the next, and IT and Days in Stock KPIs are satisfactory, the veterinary business is likely to be managing its drugs and surgical supplies part of the inventory well. Alternatively, if the proportion of business income from sales of drugs and medical supplies is decreasing compared to sales of professional services, there is likely to be a dilution effect on these costs in proportion to total income, and thus a downward effect on this KPI.

Support staff costs %

To calculate this KPI, support staff wages and associated on-costs, such as superannuation, bonuses, benefits, payroll tax and worker's compensation should be included. The US benchmark for support staff costs is 18 to 21% of income for small animal practices. Wages for support staff are lower in the US than in Australia, so this must be taken into account when interpreting this KPI. This is one of the most difficult cost categories to manage. This KPI is calculated using the following equation:

Support staff cost% = sum of support staff costs / total income

A low value for this KPI may indicate insufficient support staff so the veterinarians are not able to achieve efficiencies themselves, or the important area of customer service requires attention. A high value, or rising value, for this KPI can arise when a number of staff take long service, necessitating the hire of temporary replacement staff.

Veterinary staff costs

To calculate this KPI, veterinary owner compensation for labour input, temporary veterinary staff (locum) fees, and permanent veterinary staff wages, and on-costs such as superannuation, bonuses, benefits, payroll tax and workers compensation, should be included. This KPI is calculated using the following equation:

Veterinary staff costs % = veterinary staff costs / total income

A low value for this KPI, and a high value for support staff cost % may indicate sufficient support staff so veterinarians are able to achieve efficiency and see a high volume of patients. A high value for this KPI with a low value for support staff costs may reflect needs of the practice

being met (e.g a mixed practice needing sufficient veterinarians to cover the after-hours duty). A high value, or rising value, for this KPI may indicate a veterinary business has more highly paid veterinarians. A high value may also reflect a year with unusually high veterinary salaries or locum fees, which may be required if a veterinarian is injured or on long service leave, necessitating the hire of locums.

Pathology variable costs %

This KPI measures the variable costs of external laboratory fees and materials required for internally performed laboratory procedures, such as panels for in-house blood chemistry analysers. This KPI does not include the overhead costs involved in purchase of in-house laboratory equipment or staff time to operate equipment; these are covered by the professional component of the laboratory fees charged. For further information on overhead costs and professional fees refer to the topic notes on Fee Setting. This KPI is commonly 2 to 4% of total practice income (Stowe 2004), and is calculated using the following equation:

Pathology costs % = pathology test costs / total income

A low value may indicate that the veterinarians are not ordering many pathology tests to aid medical diagnoses. A high value or an increasing value may indicate that while veterinarians are ordering pathology tests for diagnostic purposes, the income generated by the veterinary business may need reviewing. In the latter case, income from the area of pathology should be reviewed along with calculation of the overall margin achieved on pathology variable costs. If the margin is declining, while the KPI for pathology variable costs is increasing, then two areas need to be investigated, i.e. the mark-up strategy on pathology tests, and the process by which fees are assigned to client invoices. It is common for tests to be performed but not charged to the client. This is a similar situation to drug wastage. Items are purchased by the business, but if not charged to the clients when used, it is a wastage cost to the veterinary business.

There are many other cost centres that can be examined as a cost control KPI and the process is the similar for each. Of course, which cost centres you select to monitor is determined by the strategic goals that have been set for the veterinary business. Examples of other cost centres that may be important to use as KPIs include: retail item costs, pet food costs, and rent or occupancy costs.

Monthly and Annual Management KPI Review

KPIs for veterinary business should be reviewed on a regular basis. Key issues for a veterinary business should guide the choice of KPIs to be reviewed, and the KPIs that might be used are not limited to those presented above, but may be tailored to the strategic planning needs of the business. The frequency of review may be on a monthly, quarterly and/or annual basis, depending on the criterion being monitored or the KPI being measured. Creating a summary report that includes KPIs chosen to reveal information about the key issues for a veterinary business is very useful. Common KPIs that should be reviewed regularly include:

- total practice revenue
- total practice transactions by month
- average transaction charge (ATC) by month
- new clients per month
- lost clients
- revenue, transactions and ATC per individual veterinarian per month
- revenue per sales area (e.g. species, professional services, animal health items, surgery, diagnostic imaging)
- accounts receivable, including categorisation of overdue accounts into 30, 60 and >90 days

An example set of KPIs and further calculations which reveal some business related issues for the case study practice, Lamone and Yackaville Veterinary Practice, is included in Table 11 below:

Table 11. Annual Financial Management Report for Lamone and Yackaville Veterinary Practice

Lamone and Yackaville Veterinary Practice Annual Financial Management Report 1 st July 2012 – 30 th June 2013	
General	
Practice type and Legal format	Mixed Practice, Partnership
Number of Premises	2
Total number of veterinarians FTE	4.5
Number of support staff per vet FTE	1.1
Clients and transactions	
Number of transactions per vet FTE per year	$12953 / 4.5 = 2878$
Total active clients	2760
New clients (% of active)	737 (27%)
Retained clients (% of active)	1775 (64%)
Returned clients (% of active)	248 (9%)
Transactions per client per year	$12953 / 2760 = 4.7$
Income	
Total income	1,404,652
Income per vet FTE per annum	$1,404,652 / 4.5 = \$312,145$
Income from professional services (%)	$55\% + 4\% = 59\%$
Income from product and pathology sales (%)	$37\% + 3\% = 40\%$
Costs	
All costs (as % income)	$(406,500+934,174) / 1,404,652 = 0.95 = 95\%$
Drugs and supplies (as % income)	$406,500 / 1,404,652 = 0.29 = 29\%$
Veterinarians (employers and employees) as % income	$457,741 / 1,404,652 = 0.32 = 32\%$
Support staff % of income	$173,754 / 1,404,652 = 0.12 = 12\%$
All staff (vets and support and all on-costs)	$(631,496 + 19,485) / 1,404,652 = 0.46 = 46\%$
Establishment and overhead costs (as % of income)	$283,193 / 1,404,652 = 0.20 = 20\%$
Returns (net income)	
Net income in \$	63,978
Net income as % of income (ROS)	$63,978 / 1,404,652 = 0.046 = 4.6\%$
Net income % of assets (ROA)	$63,978 / 552,177 = 0.12 = 12\%$
Professional service sales	
Professional services income	834,111
Percentage of total income	$834,111 / 1,404,652 = 0.59 = 59\%$
Net income prof services (prof services income – all expenses)	$834,111 - 934,174 = -100,063$
Net income as % of professional services income	$-100,063/834,111 = -0.12 = -12\%$
Product Sales	
Product sales income (excluding pathology)	523,177
% of total income	$523,177 / 1,404,652 = 0.40 = 40\%$
Net income product sales \$ (product sales– COGS)	$523,177 - 368,168 = 155,009$
Net income as % of product sales income	$155,009 / 523,177 = 0.30 = 30\%$
Overall markup achieved	$523,177 / 368,168 = 1.42$ i.e. mark up of 42%
Pathology Sales	
Pathology sales income	47,364
% of total income	$47,364 / 1,404,652 = 0.03 = 3\%$
Net income pathology \$ (pathology sales – path variable costs)	$47,364 - 16,623 = 30,741$
Net income pathology as % of pathology sales income	$30,741 / 47,364 = 0.65 = 65\%$
Overall markup achieved	$47,364 / 16,623 = 1.54$ i.e. mark up of 54%
Working Capital	
Working Capital = Current assets – current liabilities	$234,229 - 125,321 = \$108,908$
Current Ratio = Current assets/current liabilities	$234,229 / 125,321 = 1.87:1$
Acid-test Ratio = Cash and receivables/current liabilities	$(234,229 - 112,085) / 125,321 = 0.97:1$
Stock days	100 days
Receivables turnover	$1,404,652 / ((102,869 + 202,381)*0.5) = 9.2$
Debtor days	$365 / 9.2 = 40$ days

Benchmarking

Benchmarking is the process of comparing the results of measuring KPIs for businesses in the same sector, or between years or branches of the same business. Best practice benchmarking for veterinary business is the process of identifying the better performing practices in a sector or for a particular KPI (e.g. the top 25%). A practice's results and processes can be compared to the top 25% of participants in an external benchmarking group. Management can seek out information that explains what the top 25% of practices are doing to achieve this. Benchmarking is best done regularly, rather than as a one-off event, as a tool which veterinary business can use to continually strive to improve their processes.

The process of benchmarking must consider the differences between practices (for example in species or demographic mix) in order to make useful comparisons. Hence the adage, 'compare apples with apples'. In the case of veterinary practices, which invariably have different patient and client demographics, it is sensible to compare like with like. For example, compare mixed practices with other mixed practices. Even within the broad category of mixed practice, there are differences which will likely make comparisons tricky. For example, practices with little interaction with dairy farms will have different results to predominantly dairy practices. Similarly, practices servicing predominantly beef feedlot clients, will be different to practices servicing extensive beef production. A single small animal practice may differ to a small animal practice with a number of branches. Branches can service different demographics, so it is important to be aware of such factors when undertaking internal benchmarking.

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